

Claims

[c1] A method for supplying power, said method comprising:
supplying power to at least one critical device;
supplying power to at least one essential device; and
remotely removing power to the essential device while maintaining power to the critical device.

[c2] A method in accordance with Claim 1 wherein remotely removing power comprises remotely removing power to the essential devices while maintaining power to the critical device based on remotely monitoring the supplied power to the critical device and the supplied power to the essential device.

[c3] A method in accordance with Claim 2 further comprising:
capturing a waveform for the power supplied to the critical device; and
capturing a waveform for the power supplied to the essential device.

[c4] A method in accordance with Claim 3 further comprising:
logging data relating to the power supplied to the critical device;
logging data relating to the power supplied to the essential device; and trending at least some of the data and the captured waveforms to determine when to remove power from the essential devices.

[c5] A method in accordance with Claim 1 further comprising storing power when not supplying power to the essential device.

[c6] A method in accordance with Claim 5 wherein said storing power when not supplying power to the essential device comprises storing power with a flywheel energy storage system when not supplying power to the essential device.

[c7] An energy management system comprising:
a generation module;
at least one power distribution unit remote from said generation module and communicatively coupled to said generation module; and
a master control system remote from said generation module and said power distribution unit, said master control system communicatively coupled to said generation module and said power distribution unit.

[c8] A system in accordance with Claim 7 wherein said generation module comprises at least two power sources, said master control system configured to remotely monitor and diagnose said power sources.

[c9] A system in accordance with Claim 7 wherein said system further comprises at least two power distribution units remote from said generation module and communicatively coupled to said generation module, at least one said power distribution unit connected to at least one critical device, at least one said power distribution unit connected to at least one essential device, said master control system configured to remotely monitor said generation module and instruct said power distribution unit connected to the essential device to stop supplying power to the essential device.

[c10] A system in accordance with Claim 7 further comprising a conditioning module communicatively coupled to said generation module and said master control system, said master control system configured to remotely condition power from said generation module.

[c11] A system in accordance with Claim 10 wherein said generation module comprises at least two power sources, said master control system configured to remotely manage which power source provides power.

[c12] A system in accordance with Claim 11 wherein said at least two power sources comprises:
a utility power source; and
a generating power source.

[c13] A system in accordance with Claim 11 further comprising a flywheel energy storage system coupled to at least one of said at least two power sources.

[c14] A system in accordance with Claim 7 further comprising a flywheel energy storage system coupled to said generation module.

[c15] A system in accordance with Claim 9 wherein said generation module comprises at least two power sources, said master control system configured to remotely manage which power source provides power to said power distribution units.

[c16] A system in accordance with Claim 15 wherein said at least two power sources comprises:
a utility power source; and
a generating power source.

[c17] A system in accordance with Claim 16 further comprising a flywheel energy storage system coupled to at least one of said at least two power sources.

[c18] A system in accordance with Claim 16 further comprising an uninterrupted power supply.

[c19] An energy management system comprising:
a generation module comprising at least two power sources;
at least two power distribution units remote from said generation module and communicatively coupled to said generation module, at least one said power distribution unit connected to at least one critical device, at least one said power distribution unit connected to at least one essential device; and
a master control system remote from said generation module and said power distribution unit, said master control system communicatively coupled to said generation module and said power distribution unit, said master control system configured to remotely monitor said generation module and instruct said power distribution unit connected to the essential device to stop supplying power to the essential device.

[c20] A system in accordance with Claim 19 wherein said master control system configured to remotely monitor said generation module using a plurality of programmable logic controllers (PLC's).